If it takes 4 men 6 hours to repair a road, how long will it take 9 men to do the job if they work at the same rate?

$\frac{2}{3} \frac{9}{1} : \frac{18}{3}$ hours

They have 2.25 times more people so they will get it done 2.25 times faster. In order to get the time shorter because it will go quicker with more people, multiply by the inverse, $1/2.25$, (

$6 \times 1/2.25 = 2\frac{2}{3}$.

$= 2h40mins$.

Check

It has to be a little less than $1/2$ the time because they have a little more than double the people. So 2h40mins is reasonable, being that 3hrs is $1/2$.